REMARKS

Examiner rejects claims 11-20 under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, 35 U.S.C. 103(a) as being unpatentable over Ouhadi (EP 921153) or Zhang et al. (WO 0119920) and under 35 U.S.C. 102(a or e) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being unpatentable over Varma (US 2002/0160137).

Applicant would like to draw the Examiner's attention to EP 1,569,999, the equivalent patent to the instant application, attached hereto as **Exhibit A**. EP 1,569,999 (the '999 patent) issued from the European Patent Office and listed Ouhadi as a reference. In issuing the patent, the European Patent Office concluded that "The claimed subject matter of the Claims 1 to 10 is novel over the contents of the documents cited in the ISR as none of these documents disclose all technical features of these claims (Article 33 (2) PCT." See **Exhibit B**. The European Patent Office goes on to state that "Also an inventive step is given for this subject matter, as the specific combination of technical features of these claims is not made obvious by one or a combination of two or more of these documents (Article 33 (3) PCT." Id.

The EPO, which has the same extensive search capacity as the USPTO, reviewed the present application and concluded that the instant invention was not anticipated by the prior art, including, specifically, Ouhadi. Moreover, the EPO also concluded that the present invention was not rendered obvious by the prior art, including, specifically,

Ouhadi. Applicant would encourage the Examiner to review the prior art and Applicant's remarks in light of the EPO decision with respect to Ouhadi and the instant application.

As a preliminary matter, Applicant is confused as to what the Examiner means by the statement that "applicant is reminded that the rejections are 102/103 rejection not 102 rejection or simply 103 rejections." Under the law, a patent application may be rejected under 35 U.S.C. §102 if it is anticipated by the prior art. Also, a patent application may be rejected under 35 U.S.C. §103 if a combination of prior art renders the application obvious. Moreover, an application may be rejected if it is both anticipated and rendered obvious by prior art. In that case, it is rejected under §102 grounds and §103 grounds. However, Applicant is unaware of a situation where an application can be rejected under "102/103" grounds. Sections 102 and 103 relate to different concerns. There is no statutory provision that is "102/103." In its prior Response, Applicant set forth reasons why the application was not anticipated under §102 and reasons why the application was not rendered obvious under §103. This is the proper way to address rejections. As such, the Examiner's statement is confusing.

I. **The Examiner rejects Applicant's invention as anticipated by EP0921153 to Ouhadi, or in the alternative as obvious in view of Ouhadi.**

Applicant has amended claim 11 to more fully distinguish the invention from the prior art. Applicant has moved the limitation found in claim 17 into claim 11. Specifically, Applicant has limited component b in the composition to poly(styrene), polyethylene, polypropylene or copolymers of ethylene and propylene. Clearly none of

these recited compounds are polar. Thus, Applicant's invention does not use a component b that is polar. This is in direct contrast to the disclosure and teachings of Ouhadi. Indeed, the entire purpose of Ouhadi is to enable the combination of non-polar thermoplastics with polar thermoplastics. Ouhadi achieves this goal through the use of a compatibilizer. Applicant's invention does not utilize a compatibilizer because it is not needed. Applicant's invention does not combine a non-polar thermoplastic with a polar thermoplastic.

Under 35 U.S.C. §102, in order for a single prior art reference to anticipate a claim, every limitation of that claim must identically appear in the reference. "For a prior art reference to anticipate in terms of 35 U.S.C. § 102, every element of the claimed invention must be identically shown in a single reference." *In re Bond*, 910 F.2d 831, 832-3, 15 USPQ2d 1566, 1567 (Fed. Cir. 1990).[1] Ouhadi does not identically show every element contained in claim 11 of Applicant's invention. Applicant's claim 11 requires two, (with an optional third) specific elements for the composition: 1) a majority of styrenic block copolymer, 2) a lesser amount of a second thermoplastic resin which can be only poly(styrene), polyethylene, polypropylene or copolymers of ethylene and propylene, and 3) a plasticizing oil. Further, the first element, the styrenic block copolymer, is required to have very particular properties, specifically and of principal importance, glass transition temperature. If it does not possess these specific properties, the element of claim 11 is not met.

[1] See also *Diversitech Corp. v. Century Steps, Inc.*, 850 F.2d 675, 677, 7 USPQ2d 1315, 1317 (Fed. Cir. 1988).

Ouhadi does not teach a composition that meets the specific requirements of Applicant's claim 11. While Ouhadi does disclose the use of an SBC (styrene block copolymer) substantially in the form of SBS, SIS, SIBS, SEBS, and SEPS, (see Ouhadi paragraph 31) it is silent with respect to the key features and characteristics of the SBC required by Applicant's claim 11. Specifically, claim 11 requires that the SBC have a glass transition temperature (Tg) of at most -60°C; it must have the structure S-(I/B)-S or [S-(I/B)]nX wherein each S independently is a polymer block of predominantly styrene and (I/B) is a substantially random polymer block of predominantly isoprene and butadiene in a mutual weight ratio in the range of from 30/70 to 70/30; the S blocks must have a true molecular weight in the range of from 10,000 to 15,000; and the diblock (S-(I/B)) is limited to at most 20 mol%. These characteristics of the SBC are simply not found in Ouhadi; they are not there.

Ouhadi specifically requires the b component to be polar. Indeed, the focus of Ouhadi is the ability to combine non-polar compounds with polar compounds through the use of a compatibilizer. Ouhadi lists the polar compounds that it uses as component b in its composition. The listed, potential components are not the same as those claimed by Applicant. See Ouhadi at paragraph 35. As such, Ouhadi cannot anticipate Applicant's invention; it does not have the same elements. Ouhadi's requirement of using a polar thermoplastic as component b precludes use of Applicant's non-polar component b. Thus, Applicant's invention is not anticipated under §102 by Ouhadi.

Examiner argues that "the butadiene/isoprene blocks in the styrene block copolymers of the prior art would possess the presently claimed properties since the composition of the prior art block copolymers are essentially the same as that claimed composition." (Office Action pg. 3) However, the properties of the SBC are not essentially the same. In fact, the requirements of Applicant's invention are much stricter. Applicant specifically limits the SBC to having a glass transition temperature (Tg) of at most -60°C. This is extremely important because the Tg is determined by the ratio of butadiene to isoprene. Butadiene has a lower Tg than isoprene, so in order to achieve the required limitation of "at most -60°C," the SBC must have a particular structure in relation to the butadiene and isoprene. There is simply no mention of this in Ouhadi at all. It is completely silent with regards to Tg.

In addition, the SBC is only one part of three of the claimed invention. Applicant's invention requires not only the presence of the SBC, but requires a second thermoplastic resin (specifically poly(styrene), polyethylene, polypropylene or copolymers of ethylene and propylene), and potentially, a plasticizing oil. Conspicuously absent from Applicant's composition is a compatibilizer. Applicant's invention does not require a compatibilizer because it does not use polar compounds. In contrast, Ouhadi requires the presence of a compatibilizer (see Ouhadi, claim 1) because it seeks to blend non-polar with polar compounds. Ouhadi simply cannot anticipate or render obvious Applicant's invention. The specific properties of the SBC are not disclosed. Further, the combination of the particular SBC combined with a completely different thermoplastic resin as claimed by Applicant is not disclosed by Ouhadi.

As Ouhadi fails to anticipate Applicant's invention under §102, it also fails to render obvious Applicant's invention under §103. The disclosure and teachings of Ouhadi do not render Applicant's invention obvious under 35 U.S.C. §103 when viewed alone or in view of other prior art. As discussed in relation to anticipation under §102, Ouhadi is focused on a method to combine polar and non-polar thermoplastic elastomers. This is achieved by blending the components in a single composition and using a compatibilizer to facilitate the blending of the composition. Ouhadi teaches that the non-polar thermoplastic elastomer comprises between 50-98% by weight, most preferably 70-90%, of the blend. Also, Ouhadi teaches that the polar component is between 50-2% by weight of the total blend. The blending is only achieved through the addition and use of a compatibilizer. Thus, a compatibilizer must always be present according to the teachings of Ouhadi. Moreover, Ouhadi uses polar thermoplastics selected from thermoplastic urethane, chloro contanining polymers, fluoro containing polymers, polyesters, acrylonitirile-butadiene-styrene copolymers, styrene-acrylonitrile copolymer, styrene-maleic anhydride compolymer, polyacetal, polycarbonate, and polyphenylene oxide. Ouhadi defines the "polar" thermoplastics as ones that "contain in its molecular structure at least one atom selected from nitrogen, oxygen and halogen in addition to carbon and hydrogens." (See Ouhadi paragraph 11). Applicant's invention uses none of these components.

Indeed, in contrast to Ouhadi, Applicant's invention does not call for thermoplastics that incorporate nitrogen, oxygen, or halogen in their molecular structure.

Specifically, Applicant's invention calls for a b component selected from poly(styrene), polyethylene, polypropylene or copolymers of ethylene and propylene, none of which is polar. In addition, Applicant's invention requires that the polymer block represented by (I/B) (the isoprene/butadiene block) have a glass transition temperature (Tg) of at most -60°C. Ouhadi is completely silent with respect to any requirements of glass transition temperature. The focus of Ouhadi is to teach a method by which polar thermoplastics are combined with non-polar thermoplastics to make a blend possessing the benefits of both non-polarity and polarity by using a compatibilizer. In contrast, the focus of Applicant's invention is a composition used in transparent, gel free films; a completely unrelated area. Thus, Applicant's invention necessarily is limited by specific Tg values where Ouhadi is not. Consequently, the structure and ratio of butadiene to isoprene is critical to Applicant's invention. If the ratio is not correct, the Tg value will be wrong, thus bringing the compound outside the scope of Applicant's invention. Ouhadi simply cannot render Applicant's invention obvious when it discloses a SBC with a structure of S-I/B-S if it does not disclose or teach any of the limiting characteristics of the compound claimed by Applicant.

II. **The Examiner also rejects Applicant's invention as anticipated by, or in the alternative, obvious in view of Zhang et al and Varma.**

Like Ouhadi, Zhang et al. and Varma fail to disclose, teach, or render obvious Applicant's invention because both Zhang et al. and Varma suffer from the same fault as does Ouhadi – they only suggest an SBC with the structure S-I/B-S. They are silent regarding the Tg requirement of Applicant's invention. Despite the similar structure,

neither Zhang et al. nor Varma teach Applicant's specific invented SBC. While Zhang et al. do teach a styrenic block copolymer, the copolymer taught by Zhang does not have the same characteristics of Applicant's invention. Likewise, the teachings of Varma do not render Applicant's invention obvious because the disclosed SBC is not the same.

The Examiner states that the burden is on Applicant to demonstrate that "despite the similarity in structure the prior art compositions/components do not possess the recited properties of said structure." However, the Examiner has not shown that the prior art is similar to Applicant's invention, because it is not. Yes, the prior art discloses an SBC with a structure of S-I/B-S, but that is all. There are many, many SBCs that have the structure S-I/B-S that have incredibly different properties. Claiming that all S-I/B-S polymers have the same properties is like claiming that all buildings have the same properties; it simply is not true. Buildings vary in length, weight, width, height, material, appearance, etc. Styrenic block copolymers differ in length, weight (molecular), polarity, ratio of isoprene to butadiene, reactivity, and importantly, glass transition temperature or Tg. Thus, each of these characteristics is important in distinguishing a SBC and defining what type and kind of polymer it is. Indeed, a polymer is identified by not only its structure, but by its physical, chemical, and potentially biological properties. As such, the similarity in basic structure of two SBCs does not mean that the properties of the SBCs are similar. In this instance, neither Zhang et al. nor Varma disclose or teach Applicant's invented compound. They do not render Applicant's invention obvious under §103.

In addition to failing to teach Applicant's specific SBC and combination, Zhang et al. are focused on a fundamentally different goal - providing a polymer usable in a microscopically-expanded, three-dimensional, elastomeric web, ultimately used in bandages, dressings, and wraps. Indeed, Zhang et al. require about 20 – 80 % by weight of an elastomeric copolymer, from 3 – 60% of a vinylarene, and from 5 – 60% of a processing oil. (Zhang Claim 1). Also, Zhang et al. are focused on the use of polystyrene-ethylene/butylenes-polystyrene (SEBS) and polystyrene-ethylene-ethylene/propylene-styrene (SEEPS) block copolymers, not S-I/B-S type polymers. Moreover, Zhang et al. require the composition to include at least one vinyl arene. No where do Zhang et al. require specific Tg values for the block copolymers. Further, Zhang et al. do not place any requirements of specific molecular weights for the styrene as does Applicant. As such, Zhang et al. simply cannot render Applicant's compound obvious.

Furthermore, when compared with Zhang et al., Applicant's invention uses a much higher concentration of the styrenic block copolymer. Specifically, Applicant's invention utilizes at least 65 wt% of the styrenic block copolymer. While Zhang et al. focuses on the use of SEBS or SEPS, Applicant's invention does not use SEBS or SEEPS. Instead, Applicant's invention discloses the use of a styrenic block copolymer having a molecular structure of S-(I/B)-S or [S-(I/B)]nX wherein S is styrene and (I/B) is a block of isoprene and butadiene. (Again, the I/B ratio must be specific to result in the required limitation of a Tg value of at most -60°C.) Applicant's invention does not include block copolymers with the structure of SEBS or SEEPS. Indeed, Applicant's

invention cannot have the structure SEBS or SEEPS. They are excluded by Applicant's independent claim.

Applicant's disclosure states that the isoprene and butadiene mid-blocks should be prepared from "substantially pure styrene or mixtures comprising at least 95 wt % of styrene ... and substantially pure butadiene or mixtures comprising at least 95 wt % of butadiene." Applicant's invention goes on to state that "preferred block copolymers to be applied according to the present invention contain blocks of substantially pure styrene and mixtures of substantially pure isoprene and butadiene." This contradicts the teachings of Zhang and Varma. As such, the differences between the teachings of Zhang et al. and Applicant's invented composition are such that Applicant's invention is not rendered obvious in view of Zhang et al.

In contrast to Applicant's invention, Varma does not have anything to do with the creation of films. Varma is directed to and focused on creating a gas impermeable seal from a typically gas permeable thermoplastic elastomer. Thus, Varma is directed to the conversion of a thermoplastic elastomer with unsatisfactory oxygen permeability to one that is oxygen impermeable. Varma teaches that the method by which this conversion is accomplished is plasticizing the elastomer with a "plastic" polymer. Varma teaches blending the thermoplastic elastomer with "polybutene," which Varma defines as isobutylene, homo- and/or copolymers. Varma states that the SBS polymers typically have unacceptable oxygen permeability until they are blended with the polybutene. Varma teaches that blending often results in a polymer that has too high a degree of

tackiness, thus necessitating the addition of polybutene oil. Further, Varma teaches that in some instances it is necessary to add a detackifier to the blend.

Varma is concerned and directed to the hardness of the polymers and polymer blend, not the Tg value. Specifically, Varma teaches that the SBS blend must have a hardness of Shore A 30 up to 90. Varma is silent with respect to any requirements regarding glass transition temperatures for the SBS polymers, only addressing the Tg values as a result of the hardness characteristics. Also, Varma teaches that the preferred polymer is styrene-ethylene-butylene-styrene (SEBS) copolymer, having an average molecular weight of from about 80,000 to 500,000. Varma does disclose an SBC with the structure S-I/B-S, but simply states "A 'basic blend' of polybutene-plasticized SBS, preferably a tri block in which the mid-block is isoprene/butadiene hydrogentated in heterogeneous relative order, ..." (Varma paragraph 34). It gives no direction or specification regarding Tg, molecular weight, purity, or any other characteristic required for Applicant's invention. Indeed, Varma does not require substantially pure butadiene and isoprene.

In contrast to Varma, Applicant's invention is comprised of a styrenic block copolymer with specific requirements. One of those requirements is that the midblock of isoprene/butadiene use substantially pure isoprene/butadiene. Specifically, Applicant's invention requires a SBC having a molecular structure of S-(I/B)-S or [S-(I/B)]nX wherein S is styrene and (I/B) is a block of isoprene and butadiene, having a Tg of at most -60C, having isorprene/butadiene ratios of 30/70 to 70/30, and having a molecular

weight of between 110,000 and 160,000 (a much narrower range than that disclosed by Varma). Further, Applicant's invention does not use a detackifier, which Varma does. Thus, Varma does not teach a composition that anticipates or renders Applicant's invention obvious.

CONCLUSION

It is believed that this Application is now in condition for Allowance and such is solicited.

Respectfully submitted,

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